

nectarii depresso quadratis humilibus stylo gracili stigmate anguste umbraculiformi ca 4 mm longo. *Folliculi* juvenes graciles dense pilosi.

PERU. JAEN: forest, Cajamarca, alt 500 m, 27 March 1960, Woytkowski 5604 (holotypus MO, isotypi G, GH, US).

Description of a new *Mesechites* is a rather distasteful task, but seems really necessary here. The flowers are so large and the pilose indument so copious that at first glance I mistook the specimen for an *Odontadenia*. Two other species of *Mesechites* are pubescent, but the indument is a rather inconspicuous puberulence and the flowers of each are about half the size of those of *M. pilosissima*.—Robert E. Woodson, Jr., Missouri Botanical Garden, St. Louis (posthumously).

PIPER AND PEPEROMIA (PIPERACEAE) NEW TO PANAMA

Piper boquetense Yuncker, sp. nov.

Frutex ca 1 m altus; internodiis floriferis gracilibus conferte villosis, pilis 0.5-0.75 mm longis. *Foliis* subrhombico-ellipticis, apice longe acuminatis, basi oblique valde inaequilateralibus, latere uno usque ad 5 mm brevior rotundatis obtusis latere longiore rotundatis cordulatis, a medio infero pinnatim venosis, venis utrinque 5-6, laminae facie supra glabra infra in venas pubescente; petiolo 2-4 + 3-5 mm longo conferte villoso sub base vaginato. *Bracteis* triangulari-subpeltatis fimbriatis. *Drupa* subglobosa glabra; stigmatibus sessilibus.

Shrub about 1 m high, branching; stem somewhat nodose, the upper internodes slender, 2-5 cm long, densely villous, the hairs 0.5-0.75 mm long, crisply erect. *Leaves* subrhombic-elliptical, long-acuminate at apex, the base obliquely inequilateral with one side up to 5 mm shorter at the petiole, rounded obtuse, the longer and wider side more rounded and cordulate, 6-8 cm wide and 14-17 cm long, glabrous above, the nerves beneath pubescent with the midrib subvillous, the hairs suberect, pinnately nerved to about the middle, the nerves 5 or 6 on each side, the uppermost continuing to the apex, with slender cross-connecting anastomosing nervules, drying chartaceous, translucent; petiole 2-4 + 3-5 mm long, or up to 1 cm on lower leaves densely villous, vaginate toward the base. *Spikes* 3 mm thick and 6-10 cm long, apiculate, the peduncle 10-12 mm long, pubescent, the bracts triangular-subpeltate with villous pedicel, the rachis ridges villous with the hairs nearly as long as the bracts, the stamens 3. *Fruit* subglobose, with convex apex and sessile linear stigmas.

PANAMA. CHIRIQUÍ: vic of Boquette, Finca Collins, alt 1650 m, 24 July 1959, Stern, Chambers, Dwyer & Ebinger 1150 (holotypus MO, isotypus GH).

This species somewhat resembles *P. culebratum* C. DC., but differs in having more densely pubescent stems and more rhombic-shaped leaves which are broader below the middle and glabrous on the upper surface.

Piper dukei Yuncker, sp. nov.

Frutex ramosus nodosus, internodiis superis villosis retrorse hispidis, pilis usque ad 2 mm longis. *Foliis* subrhombico-lanceolato-ellipticis apice attenuatim longe-acuminatis basi inaequilateraliter rotundato-cordulatis supra villosis scabridis subtus villosis ad venas pro maxime, pilis erectis, valde ciliatis ad medium laminam pinnatim venosis, nerviis utrinque 6-7, petiolo brevi villoso ad basim vaginato. *Pedunculo* petiolum aequante, bracteis angustatis triangulari-subpeltatis subglabris. *Drupa* oblongo-cuneata apice truncata albida, stigmatibus parvis sessilibus.

Branching, nodose *shrub*; upper internodes slender, 5-6 cm long, moderately villous, the hairs suberect to reflexed, up to 2 mm long, intermixed with hispid understory of much shorter, retrorse hairs. *Leaves* subrhombic-lance-elliptic, with attenuately long-acuminate apex and inequilaterally rounded, cordulate base, one side 1-2 mm shorter at the petiole, the midrib up to 5 mm or more closer to the shorter side, villous above, the midrib densely so, harshly scabrid from the rigid hair bases, villous beneath with the nerves more densely so, the hairs erect, 1-1.5 mm long, strongly ciliate, 4-6.5 cm wide and 12-16 cm long, pinnately nerved to about the middle, the nerves 6 plus 7, with slender, cross-connecting, anastomosing nervules, finely glandular-dotted, drying brown, chartaceous, translucent; petiole scarcely 5 plus 1-2 mm long, villous, vaginate at the base. *Spikes* 2-3 mm thick and 6.5 cm long, apiculate; peduncle scarcely 5 mm long, villous; bracts pale, narrowly triangular-subpeltate, the lower angle narrowed and subcallose, glabrous above, or the dorsal angle with a few short bristles, the pedicel dorsally fimbriated; stamens 3 or 4. *Drupe* oblong-wedge-shaped, the apex truncate, whitened, the stigmas small, sessile.

PANAMA. PANAMA: Río Canita, along Pan-Am Hwy, open grazed area nr Jenine, 24 Sept 1961, *Duke* 3874 (holotypus MO, isotypus DUP).

The villous parts, attenuately long-acuminate apex of the strongly ciliate blades, and narrowly triangular floral bracts are distinctive feature of this species. It resembles *P. erubescentspicum* Trel. in some respects, but differs in its more strongly villous parts, more leaf nerves, and narrower and longer apex of the blade.

Piper payanum Yuncker, sp. nov.

Frutex parvus, internodiis floriferis gracilibus, crispo-villosis, pilis albis 1 mm vel ultra longis. *Foliis* elliptico-subovatis, apice acuminatis, basi oblique inaequilateralibus, latere uno ca 5 mm brevior subobtusis vel acutis, latere longiore rotundatis obtusis vel subacutis, deorsum pinnatim venosis, venis utrinque 6-7, laminae facie utrinque dissite villosa (ad venas quam maxime); petiolo 10-13 mm longo villoso fere ad medium vaginato. *Bracteis* triangulari-subpeltatis fimbriatis. *Drupa* glabra obpyramidalis-trigona, stigmatibus sessilibus.

Small *shrub*, scarcely 1 m high; upper internodes slender, 2-5 cm or more long, crisp-villous, the hairs white, 1 mm or more long. *Leaves* elliptic-subovate, acuminate at apex, the base obliquely inequilateral with one side about 5 mm shorter at the petiole and subobtuse or acutish, the longer side more rounded and obtuse or

subacute, 7-9.5 cm wide and 16-22 cm long, rather thinly villous on both sides, the nerves more densely so toward the base, the hairs white, those along the nerves erect, slightly scabrous above, ciliate, pinnately nerved to about the middle, the nerves 6 or 7 on each side, with slender cross-connecting anastomosing nervules, drying chartaceous, translucent; petiole 10-13 mm long, villous, vaginate to the middle or above. *Spikes* 3 mm thick and 6 cm long, the peduncle about 1 cm long, thinly villous, the bracts triangular-subpeltate, coarsely fringed. *Fruit* glabrous, obpyramidal-trigonous, with truncate or somewhat depressed apex and small sessile stigmas.

PANAMA. DARIEN: trail Paya to Pucra, 11 June 1959, *Stern, Chambers, Dwyer & Ebinger* 220 (holotypus MO).

The long-villous parts, leaf shape, type of bracts and shape of the fruit are distinctive characters of *P. payanum*. It differs from the allied *P. pseudogaragaranum* Trel. by its larger, scarcely cordulate leaves, longer petioles, which are vaginate to the middle or above, and more numerous veins. From *P. subulatem* C. DC., which it also resembles to some extent, the species differs in its longer petioles and peduncles and the shape of the drupes.

Piper sternii Yuncker, sp. nov.

Arbuscula ca 2 mm alta; internodiis floriferis dissite pubescentibus glabrescentibus. *Foliis* late rhombico-ellipticis, apice abrupte acuminatis, basi oblique inaequilateraliter acutis, latere uno 2-3 mm brevior ad petiolum, supra medio pinnatim venosis, venis utrinque 4-5, laminae facie supra glabra glandulosa, infra ad venas crispo-pubescente; petiolo ca 4-5 + 2-3 mm longo sub base vaginato. *Bracteis* triangulari-subpeltatis fimbriatis. *Drupa* trigona glabra, apice depressa; stigmatibus sissilibus.

Small "tree," about 2 m tall; "stem flecked with white," upper internodes 2-4 cm long, thinly pubescent glabrescent. *Leaves* broadly rhombic-elliptical, rather abruptly acuminate at apex, obliquely inequilaterally acute at base with one side 2-3 mm shorter at the petiole, 7-10 cm wide and 15-18 cm long, glabrous and rather thinly glandular-dotted above, the main nerves beneath crisp-pubescent, pinnately nerved to above the middle, the nerves 4 or 5 on each side, the uppermost strongly curving to the apex, with slender anastomosing nervules, drying thin, translucent, densely finely pellucid-dotted; petiole about 2-3 mm to 4-5 mm long, glabrate, vaginate toward the base. *Spikes* 2 mm thick and up to 12-14 cm long, the peduncle 10-13 mm long, glabrate, the bracts triangular-subpeltate, fringed. *Fruit* trigonous, glabrous, with depressed apex and sessile stigmas.

PANAMA. DARIEN: trail betw Paya & Pucro. in wet forested area, 12 June 1950, *Stern, Chambers, Dwyer & Ebinger* 420 (holotypus MO, isotypi GH, US); bank above Río Paca, *Stern et al.* 597 (MO).

Peperomia ebingeri Yuncker, sp. nov.

Herba delicatula prostrata patens, caule pergracile hirtulo pilis rigidis erectis. *Foliis* alternis orbicularibus vel rotundato-subovatis 3-4 mm latis utrinque glabris

margine valde setose-ciliato palmatim 3-nervis, petiolo dissite hirtulo; spicis terminalibus dissite florigeris, pedunculo hirtulo, rhachide verruculosa, bracteis rotundato-peltatis glabris vel saepe 1-3 setosis. *Drupa* globoso-ovoidea apice obliqua, stigmate subapicali.

Delicate, prostrate, spreading *herb*; stem very slender, hirtellous, the hairs straight, erect. *Leaves* alternate, orbicular or round-subovate, fleshy, 3-4 mm wide, glabrous on both sides, the margin prominently setose-ciliate, palmately 3-nerved with the midrib faintly branched upward, somewhat glandular dotted, with a lighter colored zone above along the nerves, drying translucent; petiole about 0.5 mm long, sparsely hirtellous glabrescent. *Spikes* terminal, loosely flowered, about 1 mm thick and 1-1.5 cm long; peduncle less than 1 cm long, hirtellous; bracts round-peltate, glabrous or often with 1-3 prominent seta-like hairs; rachis verruculose. *Drupe* globose-oid, the apex oblique with subapical stigma, eventually exerted on a pseudopedicel.

PANAMA. CANAL ZONE: Barro Colorado, David Fairchild Trail, epiphytic on tree trunk, 24 June 1960, *Ebinger 165* (holotypus MO).

The slender stems, very small, round leaves, short spikes, and setose bracts are distinctive characters of this species. It differs from *P. rotundifolia* (L.) H. B. K. in its smaller leaves, type of indument, shorter spikes, and setose bracts. From *P. delicatula* Hensch. and *P. emarginella* (Sw.) C. DC., other similar small-leaved species, it differs by the type of fruit and the setose bracts.

Peperomia philipsonii Yuncker var. **panamensis** Yuncker, var. nov.

Foliis apice acutis supra dissite adpresse puberulis 9-plinerviis, nerviis vix subramosis.

This differs from the var. *philipsonii* from Colombia in the leaves being thinly pubescent above and more shortly pointed, and with nerves scarcely branched upward and confluent within the lowermost 1 cm.

PANAMA. PANAMA: Río Pita, 1-3 mi above confluence with Río Maestra, logging roads along Río Pita, 14 Oct 1961, *Duke 4756* (holotypus Mo, isotypus DPU).

—T. G. Yuncker, *DePauw University, Greencastle, Indiana* (posthumously).

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